

WHAT IS CLAIMED IS:

(1) A mobile communication system having a plurality of radio packet channels having different transmission rate from each other between a base station and a mobile station, said mobile station comprising;

means for measuring a signal quality of a receive signal from a base station,

means for assigning packet rate relating to said signal quality thus measured,

means for transmitting said packet rate to a base station, and

data terminal for transmitting and receiving data to and from the base station with said assigned packet rate.

(2) A mobile communication system according to claim 1, wherein said signal quality is defined by distance between a base station and a mobile station.

(3) A mobile communication system according to claim 1, wherein said signal quality is defined by receive level of a pilot signal which is transmitted by the base station.

(4) A mobile communication system according to claim 1, wherein said signal quality is defined by propagation loss  $L$  which is calculated by a transmit power of a pilot signal at a base station and a receive power of said pilot signal at a mobile station.

(5) A mobile communication system according to claim 1, wherein said signal quality is defined by distance between the mobile

station and a border of cells of the base station which said mobile station belongs and an adjacent base station.

(6) A mobile communication system according to claim 1, wherein said signal quality is defined by difference  $\Delta S = S_1 - S_{\max}$ , where

$S_1$  is level of pilot signal transmitted by the base station which the mobile station belongs received at said mobile station,

$S_{\max}$  is the highest level among  $S_2$  through  $S_n$  of the pilot signals from adjacent base stations received at said mobile station.

(7) A mobile communication system according to claim 1, wherein said signal quality is defined by interference level  $I$  at the mobile station from adjacent base stations.

(8) A mobile communication system according to claim 1, wherein said signal quality is defined by receive SIR of a pilot signal transmitted by the base station.

(9) A mobile communication system according to claim 1, wherein the highest packet channel is assigned so that the following inequality is satisfied;

$$P_{\max} \geq I - L + \text{SIR} - G + A$$

where;

$P_{\max}$  is the maximum transmit power of a packet channel,

$L$  is propagation loss measured at a mobile station,

$I$  is interference power measured at a mobile station,

SIR is desired SIR for each packet channel,

$G$  is process gain for each packet channel, and

A is compensation factor for compensating characteristics of antenna and equipment.

(10) A mobile communication system according to claim 1, wherein said base station comprises;

means for receiving packet rate from a mobile station,

means for determining number of frames for continuous transmission for each packet rate,

means for transmitting said number of frames thus determined to a mobile station so that communication with said mobile station is carried out with the determined packet rate and the determined number of frames.

(11) A mobile communication system according to claim 10, wherein said number of frames to be transmitted continuously is adaptively controlled.

(12) A mobile communication system according to claim 10, wherein a short packet transmission time is assigned when a high transmission rate packet channel is selected, and a long packet transmission time is assigned when a low transmission rate packet channel is selected.

(13) A mobile communication system according to claim 10, wherein a small number of frames for continuous transmission and a large amount of data in each frame are assigned when a high transmission rate packet channel is selected, and a large number of frames for continuous transmission and a small amount of data in each frame are assigned when a low transmission rate packet channel

is selected, so that data amount to be transmitted is uniform irrespective of selected transmission rate of a packet channel.

(14) A mobile communication system according to claim 13, wherein said base station, upon finishing transmission/reception of a number of continuous frames to/from a mobile station, begins transmission/reception of a number of continuous frames to/from a next mobile station, so that a mobile station is switched recursively.